

Application No. 09/770,765
Amendment TC dated December 20, 2004
Reply to Office Action mailed October 4, 2004

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1-21 (Cancelled)
22. (Withdrawn) A method of frame rate buffering comprising:
- providing a source of compressed video which generates a compressed video stream having a variable frame rate;
 - providing a video display unit which receives said compressed video frames, decompresses said video frames and displays said video frames, wherein said unit is constrained to a fixed frame rate; and
 - padding said generated compressed video frames with frames which indicate that no change has occurred, to achieve said fixed frame rate.
23. (Withdrawn) A method according to claim 22, comprising, increasing said padding and decreasing said variable rate, to compensate for bandwidth limitation in transmission between said source and said display unit.
24. (Withdrawn) A method according to claim 22, comprising, increasing said padding and decreasing said variable rate, to compensate for an instantaneous resource limitation at said source.
25. (Withdrawn) A method of bandwidth allocation for a compressed video stream, comprising:
- generating a plurality of display commands, by executing a computer program;
 - converting said display commands into a compressed video stream;
 - estimating a future content of said video stream; and
 - allocating resources responsive to said estimate.

Application No. 09/770,765
Amendment "C" dated December 20, 2004
Reply to Office Action mailed October 4, 2004

26. (Withdrawn) A method according to claim 25, wherein said resources are one of bandwidth resources and CPU resources.

27. (Withdrawn) A method according to claim 25, wherein said program comprises a WWW browser.

28. (Withdrawn) A method according to claim 27, wherein estimating comprises identifying a future download of complex display data.

29. (Withdrawn) A method according to claim 27, wherein estimating comprises identifying a future download of a continuous data stream.

Application No. 09/770,755
Amendment "C" dated December 20, 2004
Reply to Office Action mailed October 4, 2004

30. (Previously Presented) In a system that receives data from a plurality of data sources, a method of bandwidth allocation for transmitting video on a cable network, comprising:

providing a plurality of data sources; identifying compression parameters to be used to compress the data that is received from the plurality of data sources to a desired depth of compression, the selection of compression parameters being based on a function of types of data to be displayed and a function of client capabilities;

associating the compression parameters with a set of values and threshold ranges for degrading image quality based on the types of data and a customer identifier;

receiving the data from the plurality of data sources

differentially converting said data sources into compressed video streams, responsive to an instantaneous resource restriction and based at least in part on the types of data and a content of said data sources; and

multiplexing said compressed video streams on a single transmission line.

31. (Previously Presented) A method according to claim 30, wherein said differentially converting comprises converting each data source to a different frame rate compressed video stream.

32. (Previously Presented) A method according to claim 30, wherein said differentially converting comprises, converting each data source to a different frame quality level.

33. (Previously Presented) A method according to claim 30, wherein said resource restriction comprises a bandwidth restriction.

34. (Previously Presented) A method according to claim 30, wherein said resource restriction comprises a computing resource restriction.

35. (Previously Presented) A method according to claim 30, wherein said data sources comprise display commands.

Application No. 09/770,765
Amendment "C" dated December 20, 2004
Reply to Office Action mailed October 4, 2004

36. (Cancelled)

37. (Currently Amended) A method according to claim 3630, comprising providing an indication of said content with said data sources.

38. (Currently Amended) A method according to claim 3630, comprising providing an indication of said content by analyzing display commands which are comprised in said data sources.

39. (Currently Amended) A method according to claim 3630, comprising providing an indication of said content by a software which generates at least one of said data sources.

40. (Withdrawn) A method of bandwidth allocation, comprising:
providing a distribution network having a bandwidth;
transmitting on said network a plurality of channels, comprising Internet channels and TV channels; and
dynamically allocating bandwidth between Internet channels and TV channels.

41. (Withdrawn) A method of statistical bit multiplexing, comprising:
providing a plurality of compressed video streams to be multiplexed;
providing, for at least one of said plurality of streams, side information, indicative of a content of a frame of said stream; and
differentially dropping bits from said at least one of plurality of streams, responsive to said side information.

42. (Withdrawn) A method according to claim 41, wherein said side information includes a minimal quality level for said frame.

Application No. 09/770,765
Amendment "C" dated December 20, 2004
Reply to Office Action mailed October 4, 2004

43. (Currently Amended) A method as recited in claim 30, wherein the instantaneous resource restriction comprises of bandwidth allocation for transmitting video on a cable network, comprising:

~~providing a plurality of data sources;~~
~~differentially converting said data sources into compressed video streams,~~
~~responsive to an instantaneous computing resource restriction; and~~
~~multiplexing said compressed video streams on a single transmission line.~~

44. (Currently Amended) A method according to claim 4334, wherein said differentially converting comprises converting each data source to a different frame rate compressed video stream.

45. (Currently Amended) A method according to claim 4334, wherein said differentially converting comprises, converting each data source to a different frame quality level.

46. (Cancelled).

47. (Currently Amended) A method according to claim 4631, wherein said differentially converting further comprises converting each data source to a different frame quality level.

48. (Currently Amended) A method according to claim 4631, wherein said resource restriction comprises a bandwidth restriction.

49. (Currently Amended) A method according to claim 4631, wherein said resource restriction comprises a computing resource restriction.

50. (New) A method as recited in claim 30, wherein differentially converting comprises asynchronic compression, such that new compressed data is generated only when a corresponding change has first occurred in an image.

Application No. 09/770,763
Amendment "C" dated December 20, 2004
Reply to Office Action mailed October 4, 2004

51. (New) A method as recited in claim 50, further including queuing and delaying generation of new compressed data to accommodate the instantaneous resource restriction.

52. (New) A method as recited in claim 30, wherein a same compression depth is achieved for each client receiving compressed video streams from the system.

53. (New) A method as recited in claim 30, wherein the content includes a hint corresponding to how the content should be compressed and multiplexed based upon a minimum bandwidth requirement needed by a client.

54. (New) A method as recited in claim 53, wherein the hint comprises a hint regarding a maximum quality reduction that can be applied to the content.

55. (New) A method as recited in claim 30, wherein the types of data to be displayed include parts of a display.

56. (New) A method as recited in claim 55, wherein the parts of the display include at least one of an icon and a menu bar.

57. (New) A method as recited in claim 30, wherein the types of data to be displayed include computer game data and text data, and wherein the text data is associated with a value that permits a greater depth of compression.

58. (New) A method as recited in claim 30, wherein the client identifier is a set-top box digital subscriber number.